AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for managing expressions in a database system, the method comprising the computer-implemented steps of:

receiving an expression that identifies an event structure, a first set of one or more conditions related to said event structure, and one or more action preferences in association with said event structure, wherein said event structure defines an event that corresponds with said event structure by defining a set of attributes that describe features of a corresponding event;

storing said event structure, said first set of one or more conditions, and said one or more action preferences in said database;

during a database session,

receiving a first event,

detecting that said first event is an occurrence of said event by comparing said first event to said event structure and determining that said first event corresponds with said event structure based on said set of attributes defined by said event structure that describe features of a corresponding event,

based on said detecting, selecting said first set of one or more conditions for evaluation against said first event, and

determining whether said first event satisfies any of said one or more conditions in said first set; and

in response to determining that said first event satisfies any second set of one or more conditions in said first set, then causing performance of an action corresponding to said one or more action preferences.

2. (Previously Presented) The method of Claim 1, wherein said event structure is represented as an object type in said database.

3. (Original) The method of Claim 1, wherein receiving an expression comprises receiving an expression that identifies said event structure as a composite event structure having two or more primitive events that are each represented, in said database, as an object type embedded in said composite event structure.

4. (Previously Presented) The method of Claim 3,

wherein detecting comprises detecting that said first event is an occurrence of a first primitive event of said primitive events by comparing said first event to a first primitive event structure of said composite event structure and determining that said first event corresponds with said first primitive event structure;

wherein determining comprises determining whether said first event satisfies any of said one or more conditions in said first set;

the method further comprising the computer-implemented steps of

persistently storing results of said determining in said database,

detecting an occurrence of a second primitive event of said primitive events by comparing a second event to a second primitive event structure of said

composite event structure and determining that said second event corresponds with said second primitive event structure,

determining whether said second event satisfies any of said one or more conditions in said first set,

determining whether any of said one or more conditions in said first set are satisfied by said first event and whether any of said one or more conditions in said first set are satisfied by said second event, and

wherein causing performance comprises, if said first event satisfies one or more first conditions in said first set and said second event satisfies one or more second conditions in said first set, wherein a set consisting of said one or more first conditions and said one or more second conditions have one or more corresponding action preferences, then causing performance of an action corresponding to said one or more corresponding action preferences.

5. (Previously Presented) The method of Claim 3, further comprising the computer-implemented steps of:

receiving information that specifies a period for which an occurrence of a first primitive event of said two or more primitive events is valid before an occurrence of a second primitive event of said two or more primitive events occurs; and

wherein determining comprises determining whether said occurrence of said first primitive event and said occurrence of said second primitive event satisfy any of said conditions in compliance with said information.

6. (Previously Presented) The method of Claim 3, further comprising the computer-implemented steps of:

receiving information that specifies an order in which to evaluate said conditions with respect to said primitive events; and

wherein determining comprises determining, in said order according to said information, whether said occurrences of said first and second primitive events satisfy said conditions.

7. (Original) The method of Claim 1, wherein receiving an expression comprises receiving an expression that identifies an event structure derived from structure of tables, in said database, that store data that represent event occurrences.

8. (Previously Presented) The method of Claim 7, wherein detecting that said first event is an occurrence of said event comprises detecting that said data underwent a change and that said change constitutes an occurrence of said event.

9. (Previously Presented) The method of Claim 1, wherein storing comprises storing one or more conditions from said first set as an EXPRESSION data type in an EXPRESSION column of a database table.

10. (Previously Presented) The method of Claim 1, wherein receiving an expression comprises receiving an expression that identifies a condition, from said first set, that is represented as a SQL query on said database.

11. (Previously Presented) The method of Claim 1, further comprising the computer-implemented step of:

receiving a modification, in the form of a SQL operation, to said first set of one or more conditions.

12. (Previously Presented) The method of Claim 1, further comprising the computer-implemented step of:

during a database session, providing access to a database view that comprises

a list of event occurrences that have been determined to satisfy any of said conditions from said first set,

a list of conditions from said first set that have been satisfied by event occurrences in said list of event occurrences, and

a list of action preferences that correspond with conditions in said list of conditions.

13. (Previously Presented) The method of Claim 12, further comprising the computer-implemented step of:

in response to a request from a user of said database system, performing an operation associated with said view.

14. (Original) The method of Claim 13, wherein performing an operation comprises performing an operation to resolve a conflict among two or more conditions that have been satisfied by event occurrences in said list of event occurrences.

15. (Previously Presented) The method of Claim 13, wherein performing an operation comprises performing an operation that includes scheduling an action, from said list of action preferences, for performance outside of said database system.

16. (Previously Presented) The method of Claim 1, further comprising the computer-implemented steps of:

receiving information that specifies that the step of determining is to stop when it is determined that said first event satisfies said first set of one or more conditions; and

stopping determining whether said first event satisfies any of said one or more conditions in said first set when it is determined that said first event satisfies said first set of one or more conditions.

17. (Previously Presented) The method of Claim 1,

wherein receiving an expression comprises receiving an expression that identifies a temporal condition from said first set of one or more conditions;

wherein said temporal condition specifies that an associated action corresponding to said one or more action preferences is to be performed if a second condition from said first set is satisfied by an occurrence of an event, within a particular time after a first condition from said first set is satisfied by an occurrence of an event; and

wherein determining comprises determining whether occurrences of events satisfy said first and second conditions in compliance with said temporal condition.

18. (Previously Presented) The method of Claim 1,

wherein receiving an expression comprises receiving an expression that identifies a negation condition from said first set of one or more conditions;

wherein said negation condition specifies that an associated action corresponding to said one or more action preferences is to be performed if a second condition from said first set is not satisfied by an occurrence of an event within a particular time after a first condition from said first set is satisfied by an occurrence of an event; and

wherein determining comprises determining whether occurrences of events satisfy said first and second conditions in compliance with said negation condition.

19. (Previously Presented) The method of Claim 1,

wherein receiving an expression comprises receiving an expression that identifies a group of conditions, from said first set of one or more conditions, that, when a particular number of conditions from said group of conditions is satisfied by one or more occurrences of events, triggers performance of an action corresponding to said one or more action preferences;

wherein said particular number is less than a number of conditions in said group of conditions; and

wherein determining comprises determining whether one or more occurrences of events satisfy said particular number of conditions from said group of conditions.

20. (Previously Presented) The method of Claim 1,

wherein receiving an expression comprises receiving an expression that identifies a group of sequenced conditions from said first set of one or more conditions;

wherein said group of sequenced conditions specifies that an associated action corresponding to said one or more action preferences is to be performed if said conditions from said group of sequenced conditions are satisfied in a particular sequence by one or more occurrences of events; and

wherein determining comprises determining whether one or more occurrences of events satisfy said conditions from said group of sequenced conditions in said particular sequence.

21. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 1.

22. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 2.

23. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 3.

24. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 4.

25. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 5.

26. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 6.

27. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 7.

28. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 8.

29. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 9.

30. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 10.

31. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 11.

32. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 12.

33. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 13.

34. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 14.

35. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 15.

36. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 16.

37. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 17.

38. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 18.

39. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 19.

40. (Previously Presented) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 20.

41. (Currently Amended) A system comprising:

means for receiving an expression that identifies an event structure, a first set of one or more conditions related to said event structure, and one or more action preferences related to said event structure, wherein said event structure defines an event that corresponds with said event structure by defining a set of attributes that describe features of a corresponding event;

means for storing said event structure, said first set of one or more, and said action preferences in said database;

means for receiving a first event,

means for detecting, during a database session, that said first event is an occurrence of said event by comparing said first event to said event structure and determining that said first event corresponds with said event structure based on said set of attributes defined by said event structure that describe features of a corresponding event,

means for selecting, based on said detecting, said first set of one or more conditions for evaluation against said first event, and

means for determining, during said database session, whether said first event satisfies any of said one or more conditions in said first set; and

means for determining and causing performance of an action corresponding to said one or more corresponding action preferences if said first event satisfies any one or more conditions, from said first set, that is associated with one or more corresponding action preferences.